



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/923,953  | 08/08/2001  | Shinya Kubo          | NEC01P156TTb        | 2019             |
| 21254   | 7590        | 01/26/2005           | EXAMINER            |                  |
| MCGINN & GIBB, PLLC<br>8321 OLD COURTHOUSE ROAD<br>SUITE 200<br>VIENNA, VA 22182-3817 |             |                      | MENBERU, BENIYAM    |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2626                |                  |

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/923,953             | KUBO, SHINYA        |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Beniyam Menberu        | 2626                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 August 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 4, 10 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/29/04, 8/8/01</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:

On page 6, lines 8, 13, and 14; page 9, lines 13, 21; page 12, lines 10, 15, 20, 22, 24, page 13, lines 3, 5, page 16, lines 22, 26, page 17, line 2 there is unknown character symbol used to define difference or the average value of difference of adjacent pixel values. The delta ("Δ") character should be used instead.

On page 9, line 21, the "N" in the formula should be "n".

On page 10, line 6, the inequality " $1-n \leq j \leq 1+n$ " is not correct. It should be " $i-n \leq j \leq i+n$ ".

Appropriate correction is required.

### ***Claim Objections***

2. Claims 4, 10, and 16 are objected to because of the following informalities:

On line 20 of claim 4, "i+1 and i-1" should be "i+1 or i-1".

On line 17 of claim 10, "i+1 and i-1" should be "i+1 or i-1".

On line 7 of claim 16, "i+1 and i-1" should be "i+1 or i-1".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2626

4. Claims 1, 3, 4, 7, 9, 10, 13, 15, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 1, 7, and 13 recite the limitation "said three-color image signals" in page 18, line 13, page 21, line 25, and page 25, line 25 respectively but previously on page 18, lines 5, page 21, line 24, and page 25, line 21 respectively it recites the limitation "RGB three-color image signals". Further instances of the limitation "said three-color image signals" should be corrected.

There is insufficient antecedent basis for this limitation in the claim.

6. Claim 1 recites the limitation "said sequential calculation" in page 19, line 8. On page 18, line 15 and page 19, line 4, there are two different limitations "sequentially calculating".

There is insufficient antecedent basis for this limitation in the claim.

7. Claim 3 recites the limitation "said moving average processing of number n" in lines 14-15.

There is insufficient antecedent basis for this limitation in the claim.

8. Claim 4 recites the limitation "said notable image i" in line 19. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 7 recites the limitation "said sequential calculation" in page 23, line 3. On page 22, lines 9 and 25-26, there are two different limitations "sequentially calculating". There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 2626

10. Claim 9 recites the limitation "said moving average processing of number n" in lines 11-12. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 10 recites the limitation "said notable image i" in line 16. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 15 recites the limitation "said moving average processing of number n" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 16 recites the limitation "said notable image i" in line 6. There is insufficient antecedent basis for this limitation in the claim.

***Allowable Subject Matter***

14. Claims 1-18 would be allowable if the rejections/objections are overcome.

15. The following is a statement of reasons for the indication of allowable subject matter:

In addition to the teachings of the claims 1, 7, and 13 as a whole, the closest prior art of record failed to teach or suggest, "sequentially calculating a moving average number n, where n is a natural number, of pixels with regard to a notable pixel i that is an i<sup>th</sup> pixel for  $1 \leq i \leq N$ , where i is a natural number, from a top pixel of said read color image signals by a predetermined numerical formula to thereby output results of said sequential calculations." Therefore, claims 2-6, 8-12, and 14-18 are allowable for depending on claims 1, 7, and 13.

***Other Prior Art Cited***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6061100 to Ward et al disclose a method for reducing noises in video signals by processing frames.

U.S. Patent No. 5835614 to Aoyama et al disclose an image processing apparatus capable of calculating moving average of pixels.

U.S. Patent No. 6577762 to Seeger et al disclose thresholding for generation of images.

U.S. Patent No. 6097444 to Nakano discloses a device for adjusting clock phase for digital conversion.

U.S. Patent No. 5845017 to Keyes discloses method of smoothing images using averaging of adjacent pixels.

U.S. Patent No. 6034794 to Suganuma discloses image correction method for image sensors.

U.S. Patent No. 6249608 to Ikeda et al disclose image processor which calculates moving average of pixels in a rectangular area.

U.S. Patent No. 6043900 to Feng et al disclose method for analyzing scanned document image.

U.S. Patent No. 6542639 to Konoshima et al disclose an apparatus for extracting a region of interest from a moving image.

U.S. Patent No. 6012031 to Oliver et al disclose a filter for audio signals wherein the filter length adjusts depending on the moving average of input.

Art Unit: 2626

U.S. Patent No. 6366358 to Satou et al disclose method and apparatus that analyzes print output for the detection of defects.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beniyam Menberu whose telephone number is (703) 306-3441. The examiner can normally be reached on 8:00AM-4:30PM.

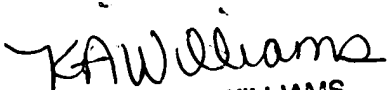
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on (703) 305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (703) 306-5631. The group receptionist number for TC 2600 is (703) 305-4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 2626

For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KIMBERLY WILLIAMS  
SUPERVISORY PATENT EXAMINER

**Patent Examiner**

Beniyam Menberu

BM

01/18/2005